SEQUENCE LISTING

<110> Meloen, Robert H
Oonk, Hendrica B

<120>

PEPTIDE, IMMUNOGENIC COMPOSITION AND VACCINE OR MEDICAL PREPARATION, A METHOD TO IMMUNISE ANIMALS AGAINST THE HORMONE LHRH, AND ANALOGS OF THE LHRH TANDEM REPEAT PEPTIDE AND THEIR USE AS VACCINE

B1

<130> 3516.2US
<140> US 09/876,257
<141> 2001-06-06
<160> 6
<170> PatentIn version 3.1
<210> 1
<211> 10
<212> PRT
<213> Unknown
<220>
<223> Luteinising Hormone Releasing Hormone (LHRH) from the hypothalamus of an undisclosed mammal.

<220>
<221> misc_feature
<222> (1)..(1)
<223> X at position 1 = pyroglutamic acid

Okay to enter JR 1-15-2003

<220>
<221> misc_feature
<222> (10)..(10)
<223> X at position 10 = glycine amide

<400> 1

Xaa His Trp Ser Tyr Gly Leu Arg Pro Xaa
1 5 10

<210> 2
<211> 21
<212> PRT
<213> Artificial Sequence
<220>
<223> Vaccine against LHRH from the hypothalamus of an undisclosed mammal.

<220>

<221> misc_feature
<222> (1)..(1)
<223> X at position 1 = preferably pyroglutamic acid, but can also be glutamine having attached thereto a tail comprising one or more additional amino acids

<220>
<221> misc_feature
<222> (3)..(3)
<223> X at position 3 = tryptophan or formylated tryptophan

B1 cont.

<220>
<221> misc_feature
<222> (14)..(14)
<223> X at position 14 = tryptophan or formylated tryptophan

<220>
<221> misc_feature
<222> (10)..(20)
<223> The sequence comprising residues 10-20 may be repeated.

<220>
<221> misc_feature
<222> (21)..(21)
<223> X at position 21 = either nothing or a tail comprising additional amino acid; preferably Cys, the C terminal cysteine being added in connection with a possible coupling of the peptide to a carrier protein.

<400> 2

Xaa His Xaa Ser Tyr Gly Leu Arg Pro Gly Gln His Xaa Ser Tyr Gly
1 5 10 15

Leu Arg Pro Gly Xaa
20

<210> 3
<211> 21
<212> PRT
<213> Artificial Sequence
<220>
<223> Vaccine against LHRH from the hypothalamus of an undisclosed mammal.

<220>

<221> misc_feature
<222> (1)..(1)
<223> X at position 1 = pyroglutamic acid

<220>
<221> misc_feature
<222> (3)..(3)
<223> X at position 3 = tryptophan or N-formyl-Trp

B1 cont.

<220>
<221> misc_feature
<222> (13)..(13)
<223> X at position 13 = tryptophan or N-formyl-Trp

<220>
<221> misc_feature
<222> (10)..(19)
<223> The sequence comprising residues 10-19 may be repeated.

<400> 3

Xaa His Xaa Ser Tyr Gly Leu Arg Pro Gly Gln His Xaa Ser Tyr Gly
1 5 10 15

Leu Arg Pro Gly Cys
20

<210> 4
<211> 21
<212> PRT
<213> Artificial Sequence
<220>
<223> Vaccine against LHRH from the hypothalamus of an undisclosed mammal.

<220>
<221> misc_feature
<222> (1)..(1)
<223> X at position 1 = pyroglutamic acid

<220>
<221> misc_feature
<222> (6)..(6)

<223> X at position 6 = a possible replacement of glycine
by a dextrorotatory amino acid which in addition contains a side chain by whic
h the LHRH tandem unit can be coupled to a carrier compound.

<220>
<221> misc_feature
<222> (16)..(16)
<223> X at position 16 = a possible replacement of
glycine by a dextrorotatory amino acid which in addition contains a side chain by which
the LHRH tandem unit can be coupled to a carrier compound.

B1 cont.

<400> 4

Xaa His Trp Ser Tyr Xaa Leu Arg Pro Gly Gln His Trp Ser Tyr Xaa
1 5 10 15

Leu Arg Pro Gly Cys
20

<210> 5
<211> 11
<212> PRT
<213> Artificial Sequence
<220>
<223> Vaccine against LHRH from the
hypothalamus of an undisclosed mammal.

<220>
<221> misc_feature
<222> (1)..(1)
<223> X at position 1 = pyroglutamic acid

<220>
<221> misc_feature
<222> (6)..(6)
<223> X at position 6 = Gly or a dextrorotatory amino
acid containing a side chain that allows coupling to a carrier compound.

<400> 5

Xaa His Trp Ser Tyr Xaa Leu Arg Pro Gly Cys
1 5 10

<210> 6
<211> 22
<212> PRT
<213> Artificial Sequence
<220>
<223> Vaccine against LHRH from the hypothalamus of an undisclosed mammal.

B1 Cancl.

<220>
<221> misc_feature
<222> (21)..(21)
<223> X at position 21 = Cys

<220>
<221> misc_feature
<222> (1)..(21)
<223> The initial cysteine of the peptide comprising residues 1-21 is joined to the initial cysteine of an identical peptide (residues 22-42) to form a dimer.

<400> 6

Cys Gln His Trp Ser Tyr Gly Leu Arg Pro Gly Gln His Trp Ser Tyr
1 5 10 15

Gly Leu Arg Pro Gly Xaa
20